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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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Anthony L. Lentine

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08/06/2007

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EXAMINER

DUONG, DUC T

ART UNIT

PAPER NUMBER

2616

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

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Office Action Summary	Application No. 09/862,573	Applicant(s) LENTINE ET AL.	
	Examiner Duc T. Duong	Art Unit 2616	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 14 May 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

2. Claims 1-13, 19, and 20 are rejected under 35 U.S.C. 102(e) as being anticipated by Walker et al (US Patent 6,650,638 B1).

Regarding to claims 1 and 19, Walker discloses a data stream compression apparatus 30 (fig. 1) comprising a data stream processing element 120 for receiving a first data stream of data entities at a first line rate 12.5 Gb/s (fig. 1 col. 6 lines 57-65), each data entity including a data packet and a gap (fig. 4C col. 9 lines 42-61; noted the field 152 includes both data and gap), the gap and data packet both including non-unique, invariant content 157 and responsive to a control signal (TYPE word) for generating a second stream of data entities at a second line rate 3.125 Gb/s which is

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less than the first line rate (fig. 10A col. 19 lines 51-52), each second data stream entity including a data packet and a gap (col. 19 lines 53-65); and a control unit 193 for providing said control signal identifying a predetermined portion of non-unique, invariant content of said first stream of data entities, said predetermined portion of non-unique, invariant content being identified using pre-knowledge of the type of said first data stream of data entities (fig. 10A col. 21 lines 12-21), and wherein said data stream processing element in response to said control signal removes said predetermined portion of non-unique, invariant content of said first stream of data entities thereby generating said second data stream of data entities at the second line rate (col. 20 lines 51-55).

Regarding to claims 2 and 9, Walker discloses the non-unique, invariant content of said first data stream is determined in real-time (col. 20 lines 21-28).

Regarding to claims 3 and 10, Walker discloses the non-unique, invariant content includes one or more inter-packet characters (fig. 3B col. 8 lines 57-62).

Regarding to claims 4 and 11, Walker discloses the first data stream is gigabit Ethernet data stream (col. 6 lines 57-60) and the non-unique, invariant content includes one or more PREAMBLE characters (fig. 3C col. 8 lines 63-67; the SOP control word read on the PREAMBLE character).

Regarding to claims 5 and 12, Walker discloses the first data stream is gigabit Ethernet data stream (col. 6 lines 57-60) and the non-unique, invariant content includes one or more IDLE2 characters (col. 5 lines 17-21).

Regarding to claims 6 and 13, Walker discloses non-unique, invariant content of said first stream of data entities has been predetermined (col. 8 lines 50-52).

Regarding to claims 7, 8, and 20, Walker discloses a data stream expansion apparatus 30 (fig. 1), comprising a data stream processing element 100 for receiving a second data stream of data entities at a second line rate 3.125 Gb/s (fig. 1 col. 6 lines 10-17), each data entity including a data packet and a gap (fig. 4C col. 9 lines 42-61; noted the field 152 includes both data and gap) and responsive to a control signal (TYPE word) for generating a first stream of data entities at a first line rate 12.5 Gb/s which is greater than the second line rate (fig. 8A col. 16 lines 7-21), a control unit 181 for providing said control signal identifying a predetermined portion of non-unique, invariant content which is to be added to said second data stream of data entities (fig. 8A col. 16 lines 7-21), said control unit using pre-knowledge to identify said predetermined portion of non-unique, invariant content 157 which is added to said second data stream of data entities (fig. 4C col. 9 lines 47-48), and wherein said data stream processing element in response to said control signal adds said predetermined portion of non-unique, invariant content to data packet or gap of one or more data entities of said second data stream thereby generating said first data stream of data entities at the first line rate (fig. 8A col. 17 lines 3-10).

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the

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invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 14-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Walker.

Regarding to claims 14 and 15, Walker discloses all the limitations with respect to claim 1 including a data stream multiplexer 34 (fig. 1). However, Walker fails to teach for a plurality of compression apparatuses. To arrange for a plurality of compression apparatuses would have been obvious to a person of ordinary skill in the art for accommodation of plurality of MAC interfaces.

Regarding to claim 16, Walker discloses a data stream expansion apparatus 30 (fig. 1), comprising a data stream processing element 100 for receiving a second data stream of data entities at a second line rate 3.125 Gb/s (fig. 1 col. 6 lines 10-17), each data entity including a data packet and a gap (fig. 4C col. 9 lines 42-61; noted the field 152 includes both data and gap) and responsive to a control signal (TYPE word) for generating a first stream of data entities at a first line rate 12.5 Gb/s which is greater than the second line rate (fig. 8A col. 16 lines 7-21), a control unit 181 for providing said control signal identifying a predetermined portion of non-unique, invariant content which is to be added to said second data stream of data entities (fig. 8A col. 16 lines 7-21), said control unit using pre-knowledge to identify said predetermined portion of non-unique, invariant content 157 which is added to said second data stream of data entities (fig. 4C col. 9 lines 47-48), and wherein said data stream processing element in response to said control signal adds said predetermined portion of non-unique, invariant content to data packet or gap of one or more data entities of said second data stream

thereby generating said first data stream of data entities at the first line rate (fig. 8A col. 17 lines 3-10).

Regarding to claims 17 and 18, Walker discloses all the limitations with respect to claim 16 including a data stream de-multiplexer 36 (fig. 1). However, Walker fails to teach for a plurality of expander apparatuses. To arrange for a plurality of expander apparatuses would have been obvious to a person of ordinary skill in the art for accommodation of plurality of MAC interfaces.

Response to Arguments

5. Applicant's arguments filed May 14, 2007 have been fully considered but they are not persuasive. Regarding to applicant's argument on pages 10-11, Walker fails to teach "using pre-knowledge of the type of said first data stream of data entities to identify the predetermined portion of non-unique, invariant content". In response, the examiner would like to direct applicant's attention to col. 8 lines 14-34. Herein, Walker discloses the non-unique and invariant content portion 157 (fig. 4C) is identified based on the structural properties (pre-knowledge) of the block. For example, if the block from which the frame is derived is composed of exclusively of control word, the structural properties (pre-knowledge) of the block will be identified by a certain TYPE word (non-unique and invariant content portion). Thus, based on the reasons set forth here the rejections are maintained.

Conclusion

6. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Duc T. Duong whose telephone number is 571-272-3122. The examiner can normally be reached on M-F (9:00 AM-6:00 PM).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wing Chan can be reached on 571-272-7493. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should

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you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

DD
DD


WING CHAN
8/2/07
SUPERVISORY PATENT EXAMINER